Naval Air Station Brunswick **Cumberland County** **Brunswick, Maine** **A-268-71-AC-A (SM)**	**Departmental** **Findings of Fact and Order** **Air Emission License** **Amendment #2**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Naval Air Station Brunswick (NASB) located in Brunswick, Maine was issued Air Emission License A-268-71-AA-R on December 7, 2004, permitting the operation of emission sources associated with their military flight operations facility. The license was subsequently amended on August 22, 2005 (A-268-71-AB-A).

2. NASB has requested an amendment to their license in order to include the licensing of a 750 kW emergency generator for Building 654 (Generator #62). As part of this installation, Generator #32, which is currently listed at Building 654, will be relocated to the Public Works storage facility and will become a spare.

   This amendment also revises the maximum capacity of Generator #59 from 230 kW to 250 kW.

B. Emission Equipment
The following equipment is addressed in this air emission license:

Equipment	**Power Output (kW)**	**Maximum Capacity (MMBtu/hr)**	**Firing Rate (gal/hr)**	**Fuel Type, % sulfur**
Engine #59 (Bldg 201)	250	2.44	17.8	diesel, 0.05%
Engine #62 (Bldg 654)	750	7.32	53.4	diesel, 0.05%

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as defined in the Department's regulations. This modification will not increase permitted emissions of any regulated pollutants. Therefore, this modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Department's regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Engine #62

A summary of the BACT analysis for Engine #62 is the following:

1. The facility's engines shall fire only diesel fuel with a maximum sulfur content not to exceed 0.05% by weight or natural gas.
2. The combined fuel usage to the engines of diesel fuel and natural gas shall not exceed the equivalent of 4,100 MMBtu/year heat input, based on a 12-month rolling total.
3. Chapter 106 regulates fuel sulfur content, however in this case a BPT analysis for SO_2 determined a more stringent limit of 0.05% was appropriate and shall be used.
4. The PM and PM_{10} limits are derived from Chapter 103.
5. NO_x, CO, and VOC emission limits for diesel fired engines are based upon AP-42 data dated 10/96.
6. Visible emissions from the engines shall each not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

C. Annual Emissions

NASB shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Licensed Annual Emission for the Facility
Tons/year
(used to calculate the annual license fee)

	PM	**PM_{10}**	**SO_2**	**NO_x**	**CO**	**VOC**	**HAP**
Fuel Burning	21.0	21.0	88.1	61.3	14.4	0.9	-
Diesel Engines	0.3	0.3	0.1	9.1	2.0	0.7	-
Engine #53	0.1	0.1	-	1.5	2.5	0.2	-
Engine #57	0.1	0.1	-	2.7	4.6	0.4	-
Process Emissions	-	-	-	-	-	45.8	9.9
Total TPY	**21.5**	**21.5**	**88.2**	**74.6**	**23.5**	**48.0**	**9.9**

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-268-71-AC-A subject to the conditions found in Air Emission License A-268-71-AA-R, in amendment A-268-71-AB-A, and in the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

The following shall replace Condition (17)(D) of Air Emission License A-268-71-AA-R:

D. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Engine #47	PM	0.12	MEDEP Chapter 103, Section 2(B)(1)(a)
Engine #49	PM	0.12	MEDEP Chapter 103, Section 2(B)(1)(a)
Engine #50	PM	0.12	MEDEP Chapter 103, Section 2(B)(1)(a)
Engine #57	PM	0.12	MEDEP Chapter 103, Section 2(B)(1)(a)
Engine #62	PM	0.12	MEDEP Chapter 103, Section 2(B)(1)(a)

The following shall replace Condition (17)(E) of Air Emission Licenses A-268-71-AA-R and A-268-71-AB-A:

E. Emissions shall not exceed the following for <u>each</u> unit: [MEDEP Chapter 115, BPT]

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Engine #4	0.27	0.27	0.12	9.88	2.13	0.78
Engines #18-1, 18-2, 18-3, 18-4	0.34	0.34	0.14	12.35	2.66	0.98
Engine #26	0.35	0.35	0.15	12.92	2.78	1.03
Engine #27	0.27	0.27	0.12	9.88	2.13	0.78
Engine #29	0.32	0.32	0.14	11.82	2.55	0.94
Engine #30	0.12	0.12	0.05	4.32	0.93	0.34
Engine #31	0.09	0.09	0.04	3.44	0.74	0.27
Engine #32	0.15	0.15	0.06	5.38	1.16	0.43
Engine #42	0.15	0.15	0.06	5.38	1.16	0.43
Engine #44	0.07	0.07	0.03	2.60	0.56	0.21
Engine #46	0.09	0.09	0.04	3.44	0.74	0.27

Emission Unit	PM (lb/hr)	PM_{10} (lb/hr)	SO_2 (lb/hr)	NO_x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Engine #47	1.05	1.05	0.45	28.10	7.46	0.79
Engine #48	0.19	0.19	0.08	6.88	1.48	0.55
Engine #49	0.47	0.47	0.20	12.48	3.32	0.35
Engine #50	0.37	0.37	0.16	9.98	2.65	0.28
Engine #51	0.27	0.27	0.11	9.79	2.11	0.78
Engine #52	0.23	0.23	0.10	8.60	1.85	0.68
Engine #53	0.13	0.13	--	5.86	9.86	0.93
Engine #55	0.10	0.10	0.04	3.53	0.76	0.28
Engine #56	0.12	0.12	0.05	4.32	0.93	0.34
Engine #57	0.25	0.25	--	10.83	18.23	1.72
Engine #58	0.35	0.35	0.15	12.92	2.78	1.03
Engine #59	0.29	0.29	0.13	10.76	2.32	0.85
Engine #62	0.88	0.88	0.38	23.42	6.22	0.66

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:_____
DAVID P. LITTELL, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-268-71-AA-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 9/19/06
Date of application acceptance: 9/21/06

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.